



**Town of Plymouth, Massachusetts**  
**Department of Marine and Environmental Affairs**

11 Lincoln Street, Plymouth, MA 02360 | 508-747-1620



December 18, 2015

Mr. Frank Gardner  
EPA Region 1  
5 Post Office Square  
Suite 100, Mail code: OSRR7-2  
Boston, Massachusetts 02109-3912

RE: Town of Plymouth, Massachusetts  
EPA Brownfield Cleanup Grant Proposal  
Former Revere Copper Property (Assessors' Parcel Map 12, Lot 46C)

Dear Mr. Gardner:

The Town of Plymouth is applying for three \$200,000 cleanup grants (three separate parcels) to remediate a site on Water Street in Plymouth, Massachusetts (herein referred to as "the Site"). The Site is located across from the former Revere Copper and Brass manufacturing facility. The Site was a former tidal wetland which was filled with industrial waste from the former Revere Copper and Brass manufacturing facility. During the early 1900s the land east of Water Street (the Site), which is now owned by the Town, was filled with material likely from the manufacturing facility. Remediation efforts reportedly costing over \$2 million dollars were undertaken at the manufacturing facility (not part of the Site that is the subject of this application) by the Plymouth Redevelopment Authority and a "partial permanent solution" was achieved in 2006 for that portion of the Disposal Site with application of a deed restriction. For the Site which is the subject of this grant application, a partial permanent solution was not feasible because concentrations of zinc in soil are an order of magnitude higher than Upper Concentration Limits (UCLs). UCLs are concentrations which have been defined by Massachusetts regulation to represent a risk to public welfare and the environment under future conditions regardless of the outcome of site specific risk assessments. As such, a "partial temporary solution" was achieved for the Site in 2008. No remediation was performed at the Site and no containment infrastructure was installed. The partial temporary solution was based on a site specific risk assessment and a deed restriction. The endpoint for the site specific risk assessment for the temporary solution was a condition of "no substantial hazard" which is a significantly lower bar than a "condition of no significant risk" which would be required for a permanent solution.

Due to the presence of soils with concentrations that exceed UCLs, an engineered barrier is required to achieve a permanent solution at the Site (see attached ABCA). More importantly, a vertical barrier specifically designed to contain the waste and withstand coastal conditions is required to prevent the movement of waste into the harbor by either gradual erosion or by a catastrophic failure of the existing revetment which was not designed specifically to contain the waste. The EPA Brownfield Cleanup Grant would be used to achieve a permanent solution through improvement of engineering controls by constructing a containment system to keep the material from entering the beach or harbor. The storm water system which is located within the waste material may be relocated and a new horizontal engineered cap would be installed. These actions will allow the Town to achieve a permanent regulatory closure for the Site, but more



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importantly will provide a more resilient solution which will protect the harbor from a potential significant future release of contaminated material during a natural disaster.

- a. **Applicant Identification:** Town of Plymouth, Massachusetts  
11 Lincoln Street  
Plymouth, Massachusetts 02360
- b. **Applicant DUNS Number:** 083386508
- c. **Funding Requested:**  
i): **Grant Type:** Cleanup  
ii): **Federal Funds Requested:** \$200,000  
iii): **Contamination:** \$200,000 for Hazardous Substances
- d. **Location:** Assessors Map 12, Lot 46B, Water Street, Plymouth, Massachusetts
- e. **Property Information:** Former Revere Copper Property, Assessors Map 12, Lot 46B, Plymouth, Massachusetts
- f. **Contacts:**  
i) **Project Director:**  
David Gould  
Director of Marine and Environmental Affairs  
11 Lincoln Street  
Plymouth, MA 02360  
(508) 747-1620 ext 127  
Email: [dgould@townhall.plymouth.ma.us](mailto:dgould@townhall.plymouth.ma.us)  
ii) **Head of Organization:**  
Melissa Arrighi  
Town Manager  
11 Lincoln Street  
Plymouth, MA 02360  
(508) 747-1620 ext 106  
Email: [marrighi@townhall.plymouth.ma.us](mailto:marrighi@townhall.plymouth.ma.us)
- g. **Date Submitted:** December 18, 2015
- h. **Project Period:** Spring/Summer 2016 – Spring/Summer 2018
- i. **Population:** Town of Plymouth Massachusetts
- j. **Other Factors Checklist:** Attached

We look forward to working with the US EPA on this project. If you have any questions, please contact me at your convenience.

Sincerely,

  
Melissa Arrighi  
Town Manager



## Appendix 1

### Cleanup Other Factors Checklist

Name of Applicant: Town of Plymouth, Massachusetts

Please identify (with an *X*) which if any of the below items apply to your community or your project as described in your proposal. To be considered for an Other Factor, you must include the page number where each applicable factor is discussed in your proposal. EPA will verify these disclosures prior to selection and may consider this information during the evaluation process. If this information is not clearly discussed in your narrative proposal or in any other attachments, it will not be considered during the selection process.

Other Factor	Page #
Community population is 10,000 or less.	
Funding distribution among EPA's ten Regions and among the states and territories	
Compliance with the 25 percent statutory petroleum finding allocation	
Federally recognized Indian tribe.	
United States territory.	
Applicant will assist a Tribe or territory.	
Targeted brownfield sites are impacted by mine-scarred land.	
Applicant demonstrates firm leveraging commitments for facilitating brownfield project completion by identifying amounts and contributors of funding in the proposal and have included documentation.	X
Recent (2008 or later) significant economic disruption ( <u>unrelated</u> to a natural disaster or manufacturing/auto plant/power plant closure) has occurred within community, resulting in a significant percentage loss of community jobs and tax base.	
Applicant is one of the 24 recipients, or a core partner/implementation strategy party, of a "manufacturing community" designation provided by the Economic Development Administration (EDA) under the Investing in Manufacturing Communities Partnership (IMCP). To be considered, <b>applicants must clearly demonstrate in the proposal the nexus between their IMCP designation and the Brownfield activities.</b>	
Applicant is a recipient or a core partner of a HUD-DOT-EPA Partnership for Sustainable Communities (PSC) grant that is directly tied to the project area, and can demonstrate that funding from the PSC grant has or will benefit the project area. To be considered, <b>the applicant must attach documentation</b> which demonstrates this connection to a HUD-DOT-EPA PSC grant	
Applicant is a recipient of an EPA Brownfield Area-Wide Planning grant.	

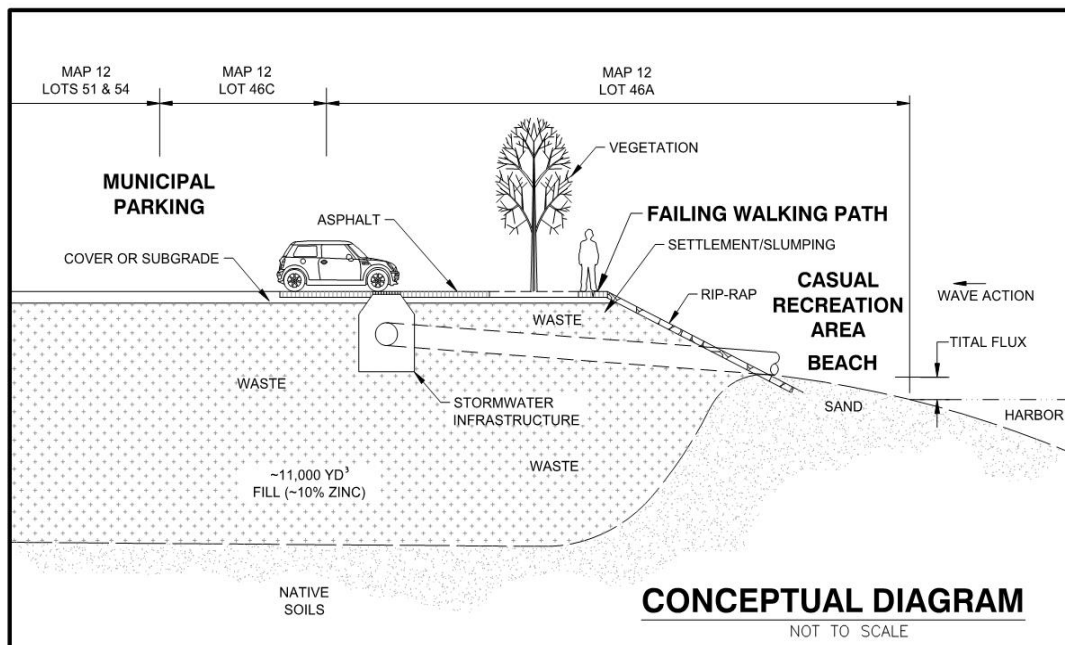
## Narrative Proposal

### Executive Summary

In 2020 Plymouth will host an anniversary celebration of national and global significance. Four hundred years prior, the Pilgrims found a safe harbor and fresh, clean water at what is now modern day Plymouth, Massachusetts.

Four hundred years of developmental history has left Plymouth with more than its fair share of contaminated properties. The fresh brooks, springs, and streams that brought life to the Plymouth Colony later provided much needed power and water to industry. The wetlands that fringed and supported Plymouth's safe harbor were filled with trash and industrial wastes. Early on, a manufactured gas plant in the heart of downtown helped to light the Town. Later, Plymouth would host a nuclear power plant which is now reaching the end of its service life and has been designated by the Federal government as one of the most dangerous reactors in the country. Over the years, 264 oil or hazardous material release sites have been reported/discovered in Plymouth. The vast majority of these sites are located in the "urban center" of the Town. Through all this, the history and natural beauty of Plymouth draws an estimated 1.5 million visitors each year from around the nation and the world. In 2020, that number is expected to jump to 7 million, presenting Plymouth with a transformative opportunity.

The Former Revere Copper site is a unique challenge that remains to be fully addressed. The most challenging portion of this property (the former zinc fill area and current municipal parking lot/beach/walking path) is the subject of this grant application (the Site). In the early 1900s, waste from the Revere Copper Plant (located across Water Street) containing high concentrations of metals was used to fill the coastal wetlands. In 2008, the Town, in consultation with the Massachusetts DEP, determined that a permanent solution was not economically feasible for this portion of the Former Revere Copper Site. The waste has been allowed to sit beneath the parking lot at the waterfront with a 2 to 3 foot revetment between the waste and the beach/harbor. Under Massachusetts regulations, this temporary solution is revisited every five years until a permanent solution is feasible. With help, that permanent solution can be realized today!



Coastal resiliency is not an abstract concept in Plymouth, but a necessary part of day-to-day planning and operations. Larger storms and higher sea levels are a reality for this coastal community with approximately 38 miles of coastline. Just last year, New England was hit with record breaking winter storms which caused significant damage to coastal infrastructure in Plymouth. These types of storm events raise concerns about the long-term sustainability of the temporary solution at the Former Revere Copper Site. In fact, evidence of slumping of the revetment is apparent today.

Although situated on a beautiful waterfront, Plymouth is largely a working class community and is defined by the state of Massachusetts as an Economically Distressed Area (EDA). Average incomes fall below the state average and, within its urban center; Plymouth has not escaped the issues such as poverty, homelessness, and substance abuse. The closing of the Pilgrim Nuclear Power Plant in 2017 is expected to result in a loss of nearly 650 jobs and \$9 million in revenues to the Town. Town budgets have been strained with preparations to host the nation in 2020, as well as ever increasing costs to repair coastal damage. In the context of these challenges, Plymouth does not have the resources to address the Former Revere Copper Site on its own at this time. A moratorium on new public construction “starts” will go into effect in 2017 in preparation for the 2020 celebration. As a result, if the Revere Copper Site is not addressed at this time, it will likely continue under the current “temporary solution” for at least 5 years further delaying the redevelopment of this key location on the Plymouth waterfront.

## **1. Community Need (20 points)**

### **a. Targeted Community and Brownfields (8 points)**

The Town of Plymouth, nicknamed “America’s Hometown” is the oldest municipality in New England and one of the oldest in America. The Town has a population of approximately 56,000 and an area of 134 mi<sup>2</sup>.

**Targeted Community:** The targeted community is defined as the “urban center” of Plymouth which is part of the Downtown Village Center/Waterfront Area and includes the Downtown/Business District and the Community of North Plymouth. It encompasses areas defined as state and national parks, as it includes the original settlement of Plymouth. Within this larger Targeted Community we have specifically focused on the neighborhoods of the disposal site and those neighborhoods immediately adjacent (see Water Street and Adjacent Neighborhood in the table below). These communities have substantially higher unemployment and poverty rates than the remainder of Plymouth. The residents of the “urban center” as a whole are subjected to higher rates of traffic and associated air pollution and exposure to many more hazardous waste sites. The targeted community consists of residents, tourists and the business community.

### **Relationship of Site to Various Components of the Community**

**Residents –** Residents use the existing beach (which we want to keep safe) and the harbor-side walking/biking/running trail (which is in frequent need of servicing due to slumping of the revetment). Residents benefit from ease of access by tourists and availability of parking which reduces traffic and idling time (current parking). Residents also benefit from tourist use of the

trails connecting the Site to the downtown/waterfront business district, which reduces local trips in an area with very high traffic congestion.

**Tourists** – The Site currently provides parking and, in short term, will continue to do so due to the need for all available parking in 2020. The Site could provide enhanced tourism/recreation opportunities in the future (after stabilization and 2020 events). The Site provides convenient access to the water (people access beach while waiting for fellow travelers) and the walking trail makes a pleasant walk that may make travelers less likely to relocate vehicles. Investment is needed to maintain and enhance these uses, while protecting human health and the environment.

**Business Community** – Access to parking provided by this site is essential for the business community (especially in 2020). After 2020, the potential addition of commercial/recreation development of the Site would offer more “things to do” in Plymouth, which would help the business community by increasing the average stay, providing a safe and convenient access point to the water for tourists, and enhancing their experience. The release of material from this site as a result of a natural disaster, would be harmful to the business community.

### **Demographic Information:**

<b>DEMOGRAPHIC INFORMATION</b>	Targeted Community Water Street and Adjacent Neighborhoods	Town of Plymouth	Massachusetts	National
Population:	3,275 <sup>5</sup>	56,271 <sup>1</sup>	6,547,629 <sup>1</sup>	311,536,594 <sup>1</sup>
Unemployment:	6.8-10.7% (splits two units) >32% household with no reported wage earnings <sup>5</sup>	4.4% <sup>2</sup>	4.6 <sup>2</sup>	5.3% <sup>2</sup>
Poverty Rate:	14.7 <sup>5</sup>	6.7% <sup>1</sup>	11.4% <sup>1</sup>	11.3% <sup>1</sup>
Percent Minority:	4.8 <sup>5</sup>	10.1% <sup>1</sup>	23.9 <sup>1</sup>	36.7% <sup>1</sup>
Median Household Income:	\$38,790 <sup>5</sup>	\$49,644 <sup>1</sup>	\$66,866 <sup>1</sup>	\$53,046 <sup>1</sup>
Cancer Incidents Rates	Unknown	~15% Higher than state average <sup>4</sup>	~6% Higher than national average <sup>3</sup>	
Number of Natural Disasters Declared	20 (Plymouth County) <sup>5</sup>	20 (County) <sup>5</sup>	NA	12 (Average US County) <sup>5</sup>

<sup>1</sup>Data is from the 2009-2013 American Community Survey and are available on American FactFinder at [http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS\\_13\\_5YR\\_DP03&src=pt](http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_13_5YR_DP03&src=pt) and [http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS\\_13\\_5YR\\_DP05&prodType=table](http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_13_5YR_DP05&prodType=table)

<sup>2</sup>Data is from the Bureau of Labor Statistics and is available at [www.bls.gov](http://www.bls.gov) (Aug. 2014)

<sup>3</sup>CDC state cancer profiles <http://statecancerprofiles.cancer.gov/incidencerates/index.php?stateFIPS=25&cancer=001&race=00&sex=0&age=001&type=incd&sortVariableName=rate&sortOrder=default>

<sup>4</sup>Cancer Incidence in Massachusetts 2006 - 2010: City and Town Supplement, Massachusetts. Bureau of Health Information, Statistics, Research and Evaluation.

<sup>5</sup> [www.city-data.com](http://www.city-data.com)

**Brownfields:** From colonial times on, Plymouth has had a wide breadth of industries including sawmills, cordswaining, textiles, leather tanning, nail works, photo engraving and etching, and anchor works. Most of these were located in the Downtown and North Plymouth villages where water power was originally located. Contaminants that have been found on previously remediated sites and those known on sites to be considered for assessment include cadmium,

lead, zinc, chlorinated solids, coal ash, copper, and petrochemicals. These substances are potential threats to human and marine life and are often found next to or adjacent to the ocean front.

According to the Massachusetts DEP database, 264 state-listed hazardous waste sites are located in Plymouth. The highest percentage of these sites are located within Plymouth's urban center. These sites include numerous town-owned sites including several parks and open spaces with industrial histories that have been closed through deed restrictions and engineering controls and/or remediation at significant expense to the town and other public and private partners. Also of note is a former manufactured gas plant located in the middle of downtown. A selection of some of the most relevant sites is provided in the table below:

Site	Ownership	Coastal /Urban	Status	Description
Siever Field Park / Industrial Burn Dump	Public	Urban	Capped and Deed Restricted	Former Industry Burn Dump deeded to Town and historically used as a ballfield, recently capped and park refurbished. Cost to Town for remediation and refurbishment was approximately \$750,000.
Standish Mill / Plymco	Publicly acquired Brownfield Site converted to open space		Excavation of Contaminated material, Regulatory Closure	Former woolen/metals mill with petroleum and metals contamination. Remediation required by Town in order to complete dam removal project. Project completed with funding by MassDevelopment, US Fish and Wildlife Service and the Coastal Wetlands Restoration Partnership (various donors). Remedial cost approx. \$600,000.
Former MPG Plant	Private	Urban	Regulatory Closure Achieved 2015	Site discovery by regulatory agencies funded in part by Town.
Stephens Field Park / Former Coastal Wetland Dumping Site	Public	Coastal and Urban	Remediation	Public park on former coastal wetland dumping and fill site contains metals and PAHs. Public park closed during assessment. Regulatory closure achieved through site specific risk assessment.
Former Bus Company Garage / DPW Garage	Currently Public / Formerly Private	Coastal and Urban	Remediation not complete	Former private bus garage, later converted to DPW garage, and currently proposed as expansion to Stephens Field. Remediation on-going at a proposed total cost of \$200,000.
Town Wharf	Public /Private	Coastal and Urban	Remediation	The Town's primary commercial/recreational wharf was contaminated with petroleum. Cleaned up through cooperation of private entities, state reimbursement funds, and the Town.
Cordage Park	Public/Private Partnership	Coastal and Urban	Multiple release sites remediated	Long standing contaminated brownfield site tackled by many of the same partners included in this application.
Holmes Playground	Public	Urban	Remediation not complete	Public park located on former mill. Concentrations of arsenic in soil to be remediated soon.

### **Cumulative Environmental Issues:**

As shown in the table above, Plymouth's cancer rates are higher than the national and statewide averages.

As discussed above there have been 264 state-listed released sites for oil and hazardous wastes identified within Plymouth, the highest concentrations of which occur within the urban center.

Most residences in this area were constructed pre-1970, which pose potential hazards associated with lead-based paint and potential asbestos exposure to residents.

The presence of tourist attractions of national significance with limited transportation infrastructure results in significant traffic congestion and associated air pollution, especially in the summer months when children are active. While asthma rates for the Target Community are not known, Massachusetts in general has significantly higher overall asthma rates as compared to the rest of the nation (14.8% as compared to 9.6% in 2008 according to the CDC).

Plymouth is host to the Pilgrim Nuclear Power Station which was designated by the US Nuclear Regulatory Commission as one of the nation's three least-safe reactors.

### **b. Impacts on Targeted Community (5 points)**

The targeted community is impacted by traffic and air pollution, those impacts are disproportionate as compared to the rest of Plymouth. As discussed in detail above, they are also disproportionately impacted by the presence of many more hazardous waste release sites and brownfields sites. As one example, summer programs at a Town park recently had to be relocated away from the Target Community because the park was closed during assessment of a historic dump area underlying the park. Overall cancer rates in Plymouth are statistically higher than the expected case count according to Mass Dept. of Public Health report. The brownfields site which is the subject of this application is regularly utilized (beach and walking path) by children, senior citizens, and other sensitive populations.

### **c. Financial Need [7 Points]**

#### **i.) Economic Conditions [3 points]**

Plymouth has been defined by the Commonwealth of Massachusetts as an Economically Distressed Area (EDA) under the Massachusetts Brownfields laws. It is also defined by the Commonwealth as an Economic Target Area (ETA).

Despite the waterfront location of many of Plymouth's Brownfields sites, property values alone are not sufficient to spur redevelopment without public investment. At the actual Revere Copper Plant (across Water Street), the Plymouth Redevelopment Authority invested over \$2 million dollars in cleaning up the plant site. Nearly 10 years later this blighted property is currently being redeveloped for residential use. Cordage Park and the Standish Mill (both described above) are similar examples of properties which remained underutilized prior to public investment in redevelopment.

The Town is fiscally stretched due to infrastructure improvements necessary in preparation for 2020, infrastructure repair due to severe storms, snow removal associated with record breaking storms in 2015, and the anticipated significant reduction in tax base due to closing of Pilgrim Nuclear Power Plant. The Pilgrim Nuclear Power Plant is slated for closure in 2017. Plymouth



has been host community to the plant since 1972. The plant is the second largest non-governmental employer in the Town, providing approximately 650 jobs. According to the Boston Globe, the plant contributes approximately \$9 million a year to the Town budget and tens of millions of additional dollars per year to Plymouth's regional economy.

According to available data, Plymouth County has declared significantly more natural disasters than most counties in the United States. A review of FEMA data indicates that the vast majority of these disasters relate to hurricanes, tropical storms, and severe winter storms. All of which put a strain on the local economy and have the potential to directly impact the infrastructure at the Site which could substantially exacerbate financial, human health, and ecological risks.

ii.) Economic Effects of Brownfields [4 points]

Brownfields have had a substantial economic impact on the Town. Significant public investment has been necessary to bring some of the larger mill complexes, such as the Former Cordage Company Mill (once the largest manufacturer of rope in the world), the Revere Copper Sites, and the Standish Worsted Wool / Plymco Mill, back into either private reuse or use as public open spaces. These mills were all located in residential areas and sat vacant or under used for many years, contributing to blight and hindering economic development. Several of the Town's parks were historically sited on former mills (Plymouth Tack), former industrial dumps (Cordage Company burn dump), and historic local dumping grounds (Stephen's Field). These sites have an impact to the Town's budget through direct costs of improving these properties to better protect public health. Through these and other brownfield related projects impacts have included: (a) costs to the Town for demolition of blighted and abandoned buildings, (b) costs to respond to illegal dumping and other crimes associated with abandoned or underutilized property, (c) decreased property values attributable negative aesthetics and real and perceived risks associated with brownfield properties, (d) lost opportunities associated with underutilized real estates, especially in the business districts, (e) the direct costs incurred by the Town in acquiring, cleaning up, and/or redeveloping property, and (f) decreased tax revenue and jobs.

**2. Project Description and Feasibility of Success** [30 points]

**a. Project Description** [15 Points]

i.) Existing Conditions (5 points)

The Site is a 3/4 acre property on the shores of Plymouth Harbor with a 120 foot stretch of beach on the east side. The Site currently serves as a municipal parking area. Between the beach and the parking lot is a 2 to 3 foot high revetment and a walking trail that is in disrepair due to slumping of the revetment. This revetment is a makeshift containment for the zinc laden material which is located under the parking area and walking trail (see Figure on page 1 and draft ABCA for additional detail).

The Site is located on the northern fringe of the business and tourism district. As tourist walk north along Water Street the surrounding use changes from shops and restaurants to parking lots on one side of the street (the Site) and an abandoned manufacturing plant on the other side, essentially bringing the district to an end. As mentioned above, the Site is currently used for municipal parking. This is clearly not the highest and best use for the property, but use options have been limited by the real and perceived impacts of the contamination on this parcel. The redevelopment of this parcel, along with the private redevelopment of the former Revere Copper manufacturing plant across the street, will change the character of this area and help revitalize

this “fringe” area of the tourism district and better connect the district to the surrounding community.

The Downtown Village Center/Waterfront Area Master Plan established goals for this area of the Town. These goals are listed below, with those goals which are supported by this project underlined:

#### AREA MASTERPLAN GOALS

*I. Promote uses that compliment and enhance the national and regional significance of the Town of Plymouth, that maximize the economic potential of the area;*

*II. Provide parking, traffic and implementation strategies throughout the year and meet the needs of the entire business community, including consumers and employees;*

*III. Maintain and expand ocean-related businesses including commercial and recreational fishing, whale watching, and harbor sightseeing;*

*IV. Promote and expand the hospitality facilities, including convention, conference, and meeting space. Interconnect and coordinate with other entertainment, recreation and cultural activities;*

*V. Develop, expand and promote the entertainment, recreation, retail and dining activities at different venues and locations throughout the Downtown Village Center/Waterfront Area; and*

*VI. Invest in and expand infrastructure including parking, docking facilities, lighting, signage, street furniture, landscaping, drainage, utilities and paving.*

The project is also very consistent the Plymouth’s overall master plan, which states “Additional access to ocean and inland waters and to scenic views...and support for the development of tourism infrastructure are all needed in order for Plymouth to encourage visitors to venture beyond Plymouth Rock, the Mayflower and Plimouth Plantation.”

The project is consistent with the goals of the Open Space Plan, which include:

*1. Increase the economic vitality and business climate of Downtown and the Harbor;*

*2. Identify capital improvement projects that serve as investments to attract private development;*

*3. Increase the attractiveness of major public spaces; and*

*4. Broaden public awareness and historical interpretation of all Plymouth eras.*

Lastly, the project is consistent with the Plymouth Public Space Action Plan, which specifically targeted the Site as a redevelopment opportunity. The Plan suggested redevelopment that would maintain access for the walking trail and take advantage of great views and access to the waterfront, perhaps a hotel.

#### ii). Proposed Cleanup Plan (10 points)

As discussed in the ABCA the proposed cleanup plan consists of improved engineering and administrative controls to allow greater certainty for protection of human health and the environment and greater potential for redevelopment. This alternative would involve installing a vertical engineered barrier specifically designed to separate the waste from the beach and harbor. It may also involve relocation of the storm water infrastructure, which is currently of unknown construction and condition and travels through the waste deposit and discharges into the harbor

next to the beach. Lastly, the alternative will involve providing a more appropriate horizontal barrier to limit direct exposure, as the current barrier was pre-existing at the time that the partial temporary solution was achieved and was not designed as a remedial cap. This alternative is very feasible and implementable and will involve minimal disruption to the community. One of the primary outputs will be achieving a permanent solution for this disposal site. The project outcomes will include minimized exposure to contamination and a remediation project that is implemented in a manner which provides a stable platform for the restored use of a harbor-side walking/running/biking path, provides safe access to a safe beach, and allows for future redevelopment following 2020 events.

**b. Task Description and Budget Table [10 Points]**

For the purposes of the budget below, the total cost described in each tasks description have been allocated over the three applications which are currently being submitted. Hence, 1/3 of the cost is shown in each budget table.

With the exception of police detail costs, the Town is not currently proposing to use in-house labor as part of the cost sharing, rather the Town expects the cost share to take the form of cash and/or materials (see Task 3 below).

**Task 1- Program Oversight:**

The Plymouth Department of Marine and Environmental Affairs staff are highly experienced in the management and oversight of grants. The Town will establish a record of activities for the Site which will be maintained at the offices of the Department of Marine and Environmental Affairs. The Town staff will conduct all required reporting under the program. The Town staff will also provide overall project management and measure progress of significant milestones and deliverables against the project schedule. A budget for supplies (\$3,000) has been allocated to cover need supplies (e.g. laptop for field use, etc.) that might be incurred during the project.

EPA funds (\$3,000) will be used for reimbursement of travel costs for 2 Town staff to attend the U.S. EPA National Brownfields Conference (Brownfields 2016 or 2017), and/or to participate in other redevelopment workshops or training sessions.

**Task 2-Community Involvement:**

Town staff, contractors/engineers, and community partners will work with a contractor to prepare and implement a Community Relations Plan (CRP). Public meetings and other forums for input will be utilized to seek public input and inform the public about proposed cleanup methods and the status of cleanup activities. Community involvement (number of meeting, etc.) will be a measured output for this project.

A budget for participation of engineers, the LSP, public relations experts and others in community involvement (\$9,000) has been allocated to cover outside expenses (e.g. fees for the services of consultants/experts, printing costs, etc.) that might be incurred during the project.

**Task 3 Site Cleanup:**

Construction costs will include construction of a vertical engineered barrier and associated infrastructure to prevent coastal erosion and migration of contaminants to the beach and harbor (\$225,000), installation of a horizontal engineered barrier and associated infrastructure to

prevent direct contact by human receptors (\$225,000), and relocation of storm water infrastructure to outside the waste area to eliminate migration via storm water (\$50,000). The above costs include an assumed Town match for construction materials such as reprocessed asphalt/concrete for construction of the barrier (\$20,000). Additional costs (not included above) that will be covered as part of the Town match may be police details (\$10,000) and utilization of DPW equipment (\$15,000). The remaining Town match would be based on cash contributions (\$75,000).

#### Task 4 Oversight of Site Cleanup:

This task includes engineering design, permitting, regulatory reporting, and construction oversight. Engineering design and permitting costs have been estimated at \$65,000. A budget has also been allocated for preconstruction testing (\$20,000). Regulatory reporting costs will include preparation of a Quality Assurance Project Plan (QAPP) (\$10,000), finalization of the Analysis of Brownfields Cleanup Alternatives (ABCA) (\$5,000), preparation of bid documents (\$10,000), ecological and human health risk assessments (\$20,000), Release Abatement Measure (RAM) Plan (\$5,000), RAM Status Reports (\$5,000), Permanent Solution Statement Report (\$5,000), and revised Activity and Use Limitation (\$5,000). Field oversight of construction activities is estimated at \$30,000. Regulatory reporting will be a measured output for this project.

#### Budget Table:

	<b>Task 1</b>	<b>Task 2</b>	<b>Task 3</b>	<b>Task 4</b>	<b>Category Totals</b>
	<b>Cooperative Agreement Oversight</b>	<b>Community Outreach &amp; Engagement</b>	<b>Site Cleanup</b>	<b>Oversight of Site Cleanup</b>	
Personnel			10,000		
Fringe Benefits					
Travel	1,000				
Equipment					
Supplies	1,000				
Contractual		3,000	165,000	60,000	
<b>Total Federal Funding</b>	<b>2,000</b>	<b>3,000</b>	<b>135,000</b>	<b>60,000</b>	<b>\$200,000</b>
<b>Cost Share</b>	<b>0</b>	<b>0</b>	<b>40,000</b>	<b>0</b>	<b>\$40,000</b>
<b>Total Budget</b>	<b>2,000</b>	<b>3,000</b>	<b>175,000</b>	<b>60,000</b>	<b>\$240,000</b>

#### **c. Ability to Leverage [5 points]**

The Town of Plymouth will contribute \$120,000 to the project (\$40,000 for each of three grants). The Town, and the Department of Marine and Environmental Affairs, has only recently begun evaluating potential sources to leverage fund, because this project will not likely be feasible without this significant grant from EPA. That said, the Department of Marine and Environmental Affairs, has a strong history of leveraging funding. Over the past 14 years, they

have managed over 100 grants totaling nearly \$14MM and received several awards for collaboration. In a recent example of leveraging, the Town Brook stream restoration project involves multiple dam removals, open space improvements, other activities to restore the historic herring run which is referenced in traditional folklore regarding the Pilgrims and Native Americans. The Town leveraged over 50 grants from public, private, and non-profit organizations over more than a decade for a total grant contribution of over \$4.5MM towards an \$8MM project.

Possible funding and services sources:

Activity	Agency	Likelihood of Participation
Public Outreach Assistance	Plymouth Regional Economic Development Foundation	Likely
Assessment (already complete)	Plymouth Redevelopment Authority	Already participating
Financial Contributions or Funding of Site Infrastructure	Plymouth Growth and Development Corporation	Likely
Possible Grants or Loan for Redevelopment	MassDevelopment	Somewhat likely

### **3. Community Engagement and Partnerships [15 points]**

#### **a. Plan for Involving Targeted Community & Other Stakeholders; and, Communicating Project Progress [5 points]**

As required by the grant, the Town's intent to pursue this grant was advertised in the newspaper and a public meeting was held on December 10, 2015. Following award of this grant, the Town will use the Town website, newspapers, partner organization websites, and a televised Selectman's meeting to notify the Town of the award and encourage community involvement. Information and updates on the cleanup work will be shared at regular Selectman's meetings, which are open to the public. Updates will also be posted on the Town website, partner's websites, via the local cable station, at the Site, and through bulletins posted at local libraries, places of business, and churches. Abutters will be notified in writing.

All communications regarding the project will emphasize the desire for community input. Questions and concerns will be address both individually and publically. A least one pre-implementation public meeting and one progress meeting will be held to consider community concerns. Additional meetings will be schedule based upon demand and interest. Concerns regarding sensitive populations and nearby residents will be given special attention. To date, the Town has not encountered significant communication barriers in the implementation of similar projects. Staff involved in the project will be trained to identify communications barriers and steps will be taken (e.g. hiring of a translator) if any communications barriers are identified.

#### **b. Partnerships with Government Agencies [5 points]**

In Massachusetts the cleanup of hazardous waste sites is privatized, cleanups are overseen by Licensed Site Professionals (LSPs) who are licensed by the state to make decisions and render opinions regarding hazardous waste sites. The work of LSPs is ultimately subject to audit by the Massachusetts Department of Environmental Protection (DEP). In the case of this Site, the Town has been in close communication with the DEP for many years and has actively sought and received compliance assistance. In general, Plymouth has a long history of working closely with



state and federal agencies to improve the environment and the economy. We have already reached out the EPA to discuss this opportunity.

Organization	Contact	Description & Role in Project
LSP	To be determined	Ensure compliance with applicable regulations and standards. Determine when regulatory milestones, such as a Permanent Solution, are achieved. Prepare regulatory submittals. Hold paramount protection of public health and the environment.
Massachusetts DEP	John Handrahan	Technical advice, compliance assistance, auditing
EPA	To be determined	Technical assistance, grant oversight
Plymouth Marine and Env Affairs	David Gould	Overall project and grant management
Plymouth Board of Health	Michelle Roberts	Assistance with public outreach and communications

#### **c. Partnerships with Community Organizations [5 points]**

The Town's plans for public involvement were described in section 3.a. above. The Town is still actively seeking additional community partners through meetings and communications with community leaders. The Plymouth Regional Economic Development Foundation is expected to be both a Community Organization Partner and a source of leveraging (through services). However, a commitment letter was not available at the time of this grant application submission due to extenuating circumstances. Other organizations being approached range from our youth to our seniors, and include the business to community. As the redevelopment of the parcel (i.e. beyond beach, parking, and walking uses) will likely occur after 2020, Plymouth will redouble efforts to involve the community in those future redevelopment plans.

Organization	Contact	Description & Role in Project
Plymouth Regional Economic Development Foundation	Jessica Casey	Assist Town with public outreach, advertisement, etc. via Facebook and Twitter and on website.
Plymouth Chamber of Commerce	Kevin O'Reilly	Public and business outreach.
Network of Open Space Friends	Patrick Farah 508-830-1620 x 204	Coordinate and cleanup of site on bi-annual basis. Public outreach.

#### **4. Project Benefits [20 points]**

##### **a. Health and/or Welfare and Environmental Benefits[10 points]**

##### **i. Health and/or Welfare Benefits (5 points)**

The health and/or welfare benefit outcomes for this project are discussed below. The cleanup of the site will minimize the potential for exposures to contaminated soil by residents and tourists. It will also prevent the potential migration of contaminants into the harbor, which would result in both ecological exposures and additional exposures to nearby residents.

The proposed use of the Site in the near future is for parking, walking/running/biking along a path along the harbor, and casual use of the beach. This is consistent with the current uses; however, the paved trail is in need of repair due to slumping of the waste materials along the revetment, a sign of the need to replace the revetment with a more robust barrier. Maintenance of this paved trail is important because it connects the portion of the residential target community

to the north with the downtown area. Specifically the trail is a section of a trail that connects Nelson Park which was recently redeveloped using \$500,000 Parkland Acquisitions and Renovations for Communities (PARC) grant from the Commonwealth, a grant program focused on communities with higher population density, lower income, higher childhood obesity, and or environmental justice concerns. The availability of walking trails also encourages exercise and the associated health benefits. There are on average 85 road races and charity walks along the harbor during a calendar year. The Site is used for parking and walking for many of these events.

The redevelopment of this area and the maintenance of this trail will encourage tourism towards this fringe area of the tourist district. The beach is used casually; however, with the improvement of this property and the redevelopment of the adjacent former Revere Manufacturing Facility across the street for residential use, the use of the beach in this area is expected to increase significantly. This project will ensure that the concentrations of zinc on the beach do to increase and public health is protected.

ii. Environmental Benefits (5 points)

The environmental benefit outcomes for this project are discussed below. The largest environmental benefit is quite obvious. The project will be keep materials with very high concentrations of zinc (>10%) out of Plymouth Harbor. Plymouth Harbor is the centerpiece of Plymouth's community and an Estimated Rare Wetland Wildlife Habitat. This project will minimize exposure to fish, bird, and shellfish.

**b. Environmental Benefits from Infrastructure Reuse/Sustainable Reuse [5 points]**

i. Planning, Policies or Other Tools (2 points)

In section 2.a.i. above, we have detailed how this project clearly fits into the Town's planning and policies.

The approach to remediation at this property will integrate green remediation principals. Leaving the waste in place using engineering controls reduces the traffic, air pollution, and carbon consumption impact associated with shipping of waste to another location. Where possible, existing infrastructure will be reused and Low Impact Development (LID) principals will be implemented. During construction a no-idle policy will be in place at the job site.

This project fits into an overall plan to make Plymouth more walkable which is addressed in the Plymouth Public Space Action Plan. In recent years many projects have been completed to foster the creation of walking trails and sites along the trails, such as parks. These include rail trails, coastal trails, downtown walking "tours", and a trail along the historic Town Brook where Plymouth has spearheaded the restoration of a herring run. The Town recently invested extensively in the upgrading and addition of sidewalks, including sidewalks along Water Street immediately adjacent to the Site. The Town has also required significant walkability and access considerations in the private redevelopment of the Revere manufacturing facility across the street.

The Town is also currently developing a Harbor Plan with UMass Boston's Urban Harbor Institute.

ii. Integrating Equitable Development or Livability Principles (3 points)

This project will incorporate the following livability principals:

*Provide more transportation choices* – The project will help maintain and improve the setting for a walking/running/biking path that connects the Seaside Trail (rail trail) and residential communities to the north to the downtown area (see Section 4.b.i. above).

*Increase economic competitiveness* – The remediation of the site will help foster the redevelopment of the area and the actual site itself, expanding the tourism district and enhancing the overall tourism experience in Plymouth. This will help Plymouth compete for tourism dollars.

*Support existing communities* – The project supports the existing communities by improving the economic competitiveness and increases the connection of residential communities to the downtown (see above).

*Leverage federal investment* – The Town of Plymouth is highly experienced at leveraging investments from grant sources. Many of the Town's projects involve funding from multiple sources and, as evidence elsewhere in this application, the Town has plans in place to leverage funding for this project (see Section 2.c. above).

*Value communities and neighborhoods* – This project straddles a commercial tourism district community and a residential community. The completion of this project will add value to both by creating a safer environment for residents and tourists and improving the tourism district.

**c. Economic and Community Benefits [5 points]**

i.) Economic or Other Benefits (3 points)

There are both economic and non-economic benefits to this project. While the use of this parcel will likely remain the same through 2020 due to the communities need for parking for this major event, this project will help remove both uncertainty and stigmas associated with this property and allow for the potential of more economically advantageous redevelopment after 2020 (e.g. a mixed use of waterfront centered commercial/recreational use combined with some parking, such as restaurant, hotel, small boat rental, etc.). The expansion of the commercial district in this area will help support surrounding businesses. Even before 2020, the restoration of this parcel, combined with the private redevelopment of the Revere Plant property across the street, will make this area more attractive to tourists and encourage visits to the nearby businesses. The preservation and enhancement of the walking trail will also have non-economic benefits for the surrounding community, enhancing access to the waterfront. The ecological benefits from the project are obvious. Lastly, the prevention of a sudden release of materials to the harbor during a natural disaster serves as a significant cost avoidance benefit by proactively preventing the substantial cost of remediating the harbor.

ii.) Job Creation Potential: Partnerships with Workforce Development Programs (2 points)

In the procurement processes, Plymouth will encourage bidders provide a plan for utilizing local companies and/or staff.

**5. Programmatic Capability and Past Performance [20 points]**

**a. Programmatic Capability [12 points]**

The Department of Marine and Environmental Affairs will manage this grant. The Department was established 3 years ago to focus on protecting and managing natural resources in the community including coastal resources in Plymouth. The creation of this Department is

testament to Plymouth's commitment to protecting the environment and enhancing the community. The staff at the Department have acquired and managed over \$14,000,000 in grants over 14 years (the Department was previously a Division within the Department of Public Works). The Department is managed by David Gould who has been with the Town for 14 years and is highly experienced in the management of these types of grants. He is assisted by a team of professionals who have assisted in the management of many of the grants listed above. Projects managed by David and the staff of the Department have received awards from the Environmental Business Council of New England for Outstanding Collaboration, two awards for Spirit and Partnership from Coastal America, a NOAA Environmental Hero Award, a Gulf of Maine Council of the Marine Environment Sustainable Communities Award, and a Boston Society of Architects Award for Urban Design. The Department is familiar with competitive procurement procedures for contracting engineers/LSPs and remediation contractors. The Town also has full time staff that specialize in procurement. The Department staff will be responsible for the tracking of outputs and outcomes.

**b. Audit Findings (2 points)**

The Town of Plymouth has not had any adverse audit findings associated with any grants.

**c. Past Performance and Accomplishments (6 points)**

**i.) Currently or Has Ever Received an EPA Brownfields Grant (6 points)**

The Town of Plymouth has not been awarded EPA Brownfields Grants in the past. However, it has received Brownfields Grants from other entities.

**1. Compliance with Grant Requirements (3 points)**

Not Applicable

**2. Accomplishments (3 points)**

Not Applicable

**ii.) Has Not Received an EPA Brownfields Grant but has Received Other Federal or Non-Federal Assistance Agreements (6 points)**

**1 & 2. Purpose and Accomplishments (3 points) and Compliance with Grant Requirements (3 points)**

Plymouth and the Department have successfully managed over 100 grants. These have included both state and federal grants. The Town has in all cases complied with the various grant requirements and never received any negative audit findings. Five examples of grants managed by Plymouth are listed below. Each of these projects was managed by the same team at the Department of Marine and Environmental Affairs that the Town proposes to assign to this project.

In 2002 The Town of Plymouth was awarded \$25,000 in NOAA funding to remove the Billington Street Dam. These funds, in conjunction with other state and federal funding sources, totaling approximately \$400,000, were used to successfully complete the first pro-active dam removal on a coastal stream within the Commonwealth of Massachusetts. It restored anadromous fish passage to this portion of historic Town Brook and was the beginning of an ongoing restoration program that continues to this day. The Billington Street Dam has since been

removed and the work was completed on-schedule and within budget. Reporting for the grant consisted of quarterly reports and final reports. All reporting was submitted on-time and was considered acceptable.

In 2006 the Town of Plymouth received \$54,000 in NOAA funds to initiate the engineering and permitting of the Off Billington Street and Plymco Dams on Town Brook. With help from this grant and other additional state and federal grant funding these two dams were successfully removed in 2014 and 2015. The total project budget was approximately \$4MM. The work was completed on schedule and within budget. Reporting for the grant consisted of quarterly reports and final reports. All reporting was submitted on-time and was considered acceptable.

In 2007 the Town of Plymouth received a \$1MM US Fish and Wildlife Service National Wetlands Conservation Grant towards the Eel River Headwaters Restoration Project. With the help of this grant and addition of other state and federal funding this project successfully restored 40 acres of former cranberry bog to natural wetlands and stream habitat along with a dam removal and two culvert replacements and was the largest freshwater wetlands restoration project in the Commonwealth. The total project budget was \$2.5MM. Reporting for the grant consisted of quarterly reports and final reports with copies of all invoices paid. All reporting was submitted on-time and was considered acceptable.

In 2011 the Town of Plymouth received \$48,980 in Massachusetts Coastal Zone Management Coastal Pollution Remediation (CPR) funds to install a storm water system along Pond Road adjacent to Great Herring Pond, which is located within an Area of Critical Environmental Concern (ACEC). The Town utilized Town crews to successfully complete this project and maximize the grant funding. The project costs were approximately \$150,000. Reporting for the grant consisted of quarterly reports and final reports. All reporting was submitted on-time and was considered acceptable.

In 2015 the Town of Plymouth was awarded \$2MM in Mass Works funding to reconstruct the T-Wharf (which is also a contaminated site) in Plymouth Harbor. The T-Wharf is just a short stroll down the walking path from the Site that is the subject of this application. In conjunction with Town funding this project will rebuild the commercial fishing pier in Plymouth Harbor and support the growth of the aquaculture industry. The total project budget is approximately \$4MM.

## **2. Compliance with Grant Requirements (3 points)**

### **iii.) Has Never Received Any Type of Federal or Non-Federal Assistance Agreements [3 points]**

Not applicable

## **V.C. Other Factors**

See attached file: Other Factors Checklist.doc

## **V.D. Proposal Checklist for Cleanup Grants**

See attached file: Proposal Checklist for Cleanup Grants.doc



## Appendix 2

### Cleanup Proposal Checklist

Name of Applicant: Town of Plymouth, Massachusetts

Before you submit your proposal(s) for a cleanup grant, please ensure the following documents are included in your proposal package.

✓	Transmittal Letter (2-page limit)
✓	Other Factors Checklist (located in Appendix 3) attached to the Transmittal Letter
✓	The Narrative Proposal, which includes the responses to ranking criteria (15-page limit_
✓	Documentation of all applicable threshold criteria (see Section III, B and C)
✓	Letter from the state or tribal environmental agency (see Section II.C..2.)
✓	Draft Analysis of Brownfields Cleanup Alternatives (ABCA) (see FAQs and Section III.C.6.)
✓	Documentation indicating committed firm leveraged resources, if applicable (see Section V.B.2.c)
✓	Letters of Commitment from all community organizations identified in the Community Engagement and Partnerships ranking criterion (see Section V.B.2.)
✓	Documentation of community notification, including copies of ads (or equivalent) and comments received by you, your organization's responses to those comments, and meeting notes and sign-in sheets (see Section III.C.6.)
NA	Documentation of nonprofit status, if applicable (see Section III.C.1.a.)
NA	Documentation of applicant eligibility if other than city, county, state, or tribe (see Section III.C.1.a.)
NA	Justification for cleanup cost share waiver, if applicable (see Section III.C.5.)

### **Attachments**

- A. Threshold Documentation (Now an attachment - not part of the 15 page limit)
- B. Letter from state environmental authority
- C. Letters of support from community-based organizations
- D. Documentation indicating leveraged funds committed to your project
- E. Documentation of community notification including copies of public notices, comments received, response to comments, notes & sign-in sheets
- F. Analysis of Brownfields Cleanup Alternatives

## **THRESHOLD CRITERIA: Attachment A**

### **1. Applicant Eligibility**

#### **a. Eligible Entity**

The subject property is located in the Town of Plymouth, Massachusetts and consists of a parking lot identified on the Assessors Map 12, Lot 46A (herein referred to as “the Site”). The Town of Plymouth is a “local government” and is therefore eligible to apply as a General Purpose Unit of Local Government.

#### **b. Site Ownership**

The Town of Plymouth is the sole owner of the property. The property was purchased by the Town on in 1973. The Town plans to retain ownership until the cleanup is completed.

### **2. Letter from the State or Tribal Environmental Authority**

See attached Letter from the Massachusetts Department of Environmental Protection.

### **3. Site Eligibility and Property Ownership Eligibility**

#### **Site Eligibility:**

#### **a. Basic Site Information**

Site Name: Former Revere Copper  
Address: 197 Water Street, Plymouth, Massachusetts 02360  
Current Owner: Town of Plymouth  
Site Acquisition: August 6, 1973

#### **b. Status and History of Contamination at the Site**

The Site is a former wetland which was presumably filled with contaminated fill from the adjacent Revere Copper Plant in the early 1900s. The contaminated fill encompasses an area of approximately  $\frac{3}{4}$  of an acre and concentrations of zinc in the fill material exceed 100,000 ppm (>10% zinc). The property is currently used for parking, walking/biking/running, and casual beach recreation. The greatest environmental concern associated with the property is that the contaminated fill is located behind a revetment that was not specifically designed to contain hazardous wastes. This revetment is located on a beach used for recreation and, at high tide, just feet from the harbor. The harbor is of significant ecological, economic, historic, and scenic importance and is an estimated habitat for rare wildlife species.

#### **c. Sites Ineligible for Funding**

The Site is not listed or proposed for listing on the National Priorities List. It is not subject to unilateral administrative orders, court orders, administrative consent orders, or judicial consent decrees issued under CERCLA.

#### **d. Sites Requiring a Property-Specific Determination**

This Site does not require a property specific determination.

**e. Environmental Assessment Required for Cleanup Proposals**

A number of environmental assessments, equivalent to Phase II Reports, have been conducted for the Site. These are discussed and summarized in the Class C-1 Partial Response Action Outcome (RAO) Statement and Report and Notice of Activity and Use Limitation that was dated February 7, 2008. The investigations included assessment of the nature and extent of soil, groundwater, surface water, and sediment impacts.

**Property Ownership Eligibility:**

**f. CERCLA §107 Liability**

The Town of Plymouth is not potentially liable for contamination at the Site. The Town did not own or operate the property at the time the waste was placed on the property, they did not arrange for disposal on the property, and did not transport material to the property. The Town was not aware of the presence of contamination when they acquired the property in 1973. Based upon the above it is the Town's opinion that they are an innocent landowner under CERCLA.

**g. Enforcement Actions**

There has been no enforcement action relative to this Site.

**h. Information on Liability and Defenses/Protections**

*i) Information on the Property Acquisition*

The parcel and other adjacent parcels were purchased on August 6, 1973 from Revere Copper and Brass, Inc for a fee of \$53,080. The Town had no relationship with the seller relative to the presence of hazardous substances.

*ii) Timing and/or Contribution toward Hazardous Substances Disposal*

All disposal of hazardous substances occurred prior to the Town's ownership. The Town did not cause or contribute to the release or arrange for disposal or transport the waste.

*iii) Pre-Purchase Inquiry*

The specifics of pre-purchase inquiry are not known, because the property was purchased a long time ago.

*iv) Post-Acquisition Uses*

The Town has used the property as a parking area and casual/passive recreation area. It has been used by the citizens of Plymouth and visitors.

*v) Continuing Obligations*

The Town has worked cooperatively with Licensed Site Professionals and the Massachusetts Department of Environmental Protection (DEP) to take all reasonable steps within their financial means to stop continuing releases, prevent threatened future releases, and prevent or limit exposure to previous release. This is evidence in

the temporary solution that was achieved in 2008 and subsequent regulatory submittals.

**i. Property Ownership Eligibility – Petroleum Sites – NOT APPLICABLE**

- i) Current and Immediate Past Owners
- ii) Acquisition of Site
- iii) No Responsible Party for the Site
- iv) Cleaned Up by a Person Not Potentially Liable
- v) Relatively Low Risk
- vi) Judgements, Order, or Third Party Suits
- vii) Subject to RCRA
- viii) Financial Viability of Responsible Parties

**4. Cleanup Authority and Oversight Structure**

- a. The Site is currently a listed hazardous waste site in the State of Massachusetts and is being managed in accordance with the Massachusetts Contingency Plan. In Massachusetts the cleanup of hazardous waste sites is privatized, cleanups are overseen by Licensed Site Professionals (LSPs) who are licensed by the state to make decisions and render opinions regarding hazardous waste sites. The work of LSPs is ultimately subject to audit by the Massachusetts Department of Environmental Protection (DEP). In the case of this Site, the Town has been in close communication with the DEP for many years and has actively sought and received compliance assistance. The Town will procure a LSP to oversee the cleanup of the site prior to the beginning of any remediation. The LSP will be acquired consistent with the applicable competitive procurement provisions (2 CFR 200.317-326). The work of the LSP will be coordinated and managed by the Town of Plymouth Department of Marine and Environmental Affairs.
- b. The project does not require access to neighboring properties. However, the ocean is located to the east, the property to the south is owned by the Town, and Water Street is located to the west. In the unlikely event that access to the property to the north is required, the Town will prepare an access agreement with the property owner.

**5. Statutory Cost Share**

The Town of Plymouth is committed to providing the 20% cost share associated with the project when the Brownfields Cleanup Grant is awarded by the EPA. The Town of



Plymouth will satisfy the cost share through a combination of primarily cash and capping materials for the cleanup and remediation of the site.

**6. Community Notification**

The Town of Plymouth has provided notification through an ad placed in the Old Colony Memorial on December 2nd. This notification stated that a copy of the draft proposal was located for review on the 2<sup>nd</sup> floor of the Town Hall (11 Lincoln Street, Plymouth). The notification read that public comments would be accepted through David Gould, Director, Department of Marine and Environmental Affairs and that the draft proposal would be discussed at a public meeting which was held on Thursday, December 10, 2015 in the Harbor Room, 1<sup>st</sup> floor of Town Hall, 11 Lincoln Street, Plymouth, Massachusetts 02360. Attachment 1 contains a copy of the community notification ad. The public meeting was open at 7:00 p.m. and closed at 7:20 p.m. with no attendees and no comments were received.



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

Charles D. Baker  
Governor

Karyn E. Polito  
Lieutenant Governor

Matthew A. Beaton  
Secretary

Martin Suuberg  
Commissioner

December 10, 2015

U.S. EPA New England  
Attn: Frank Gardner  
5 Post Office Square, Suite 100  
Mail Code: OSRR07-3  
Boston, MA 02109-3912

**RE: STATE LETTER OF ACKNOWLEDGMENT**  
***Town of Plymouth, Application for EPA Cleanup Grant Funds***

Dear Mr. Gardner:

I am writing to support the proposal submitted by the Town of Plymouth (Town) under the Fiscal Year 2016 U.S. Protection Agency (EPA) Brownfield Cleanup Grant Program. The Town is seeking EPA funding to stabilize the parking lot at 197 Water Street, which is located along the Plymouth Harbor. The property is listed with the Massachusetts Department of Environmental Protection (MassDEP) due to a release of hazardous materials from historic uses. This funding will allow the Town to stabilize the existing sidewalk and improve the stormwater system to prevent migration of contaminated soil into the harbor, thus adding resiliency associated with storm overwash and erosion.

On January 23<sup>rd</sup>, 2015 Governor Baker signed his first Executive Order, creating the Community Compact Cabinet, in order to elevate the Administration's partnerships with cities and towns across the Commonwealth. Lieutenant Governor Polito chairs the cabinet, which concentrates financial, technical, and other resources at the state level to a select group of projects including Brownfields. The Town's compact was signed on November 19<sup>th</sup>, ensuring any funding provided by EPA will be supported by a focused commitment of state resources.

We greatly appreciate EPA's continued support of Brownfield efforts here in Massachusetts.

Sincerely,

Kerry Bowie  
Brownfields Coordinator, MassDEP Commissioner's Office

cc: David Gould, Director, Department of Marine and Environmental Affairs, Town of Plymouth  
John Handrahan, Brownfields Coordinator, MassDEP Southeast Regional Office  
Angela Gallagher, Assistant Brownfields Coordinator, MassDEP Southeast Regional Office



Attachment D  
TOWN OF PLYMOUTH  
OFFICE OF THE  
**PLYMOUTH REDEVELOPMENT AUTHORITY**  
11 Lincoln Street  
Plymouth, Massachusetts 02360  
(508) 747-1620 ext. 147  
FAX: (508) 830-4116

Mr. Frank Gardner  
EPA Region 1  
5 Post Office Square  
Suite 100, Mail code: OSRR7-2  
Boston, Massachusetts 02109-3912

RE: Town of Plymouth, Massachusetts  
EPA Brownfield Cleanup Grant Proposal

Dear Mr. Gardner:

The Plymouth Redevelopment Authority looks forward to working with the Town of Plymouth Department of Marine and Environmental Affairs to stabilize the former Revere Copper site. Given its experience and expertise on this site and other similar projects, the PRA will provide technical assistance where and when needed.

This site and its stabilization are paramount to sustainable and safe future development of the Downtown district.

Sincerely,



Laura L. Schaefer  
Executive Director



Water Street, Plymouth  
**LEGAL NOTICE**

The Town of Plymouth Department of Marine and Environmental Affairs is submitting an Environmental Protection Agency (EPA) Brownfields Cleanup Grant for the municipal parking lot located at (Assessors Map 12, Lots 46A and 46C) Water Street, Plymouth, MA 02360.

A copy of the grant proposal including the draft Analysis of Brownfields Cleanup Alternatives (ABCA) is available for public review on the 2nd floor of Town Hall in the Department of Marine and Environmental Affairs office. Public comments on the draft grant proposal will be accepted in writing and should be sent to David Gould, Director, Department of Marine and Environmental Affairs, 11 Lincoln Street, Plymouth, MA 02360.

A public meeting on this application will be held at 7 p.m. on Thursday, December 10, 2015 in the Lower Level of Town Hall, 11 Lincoln Street, Plymouth, MA 02360.

AD#13365113  
OCM 12/2/15

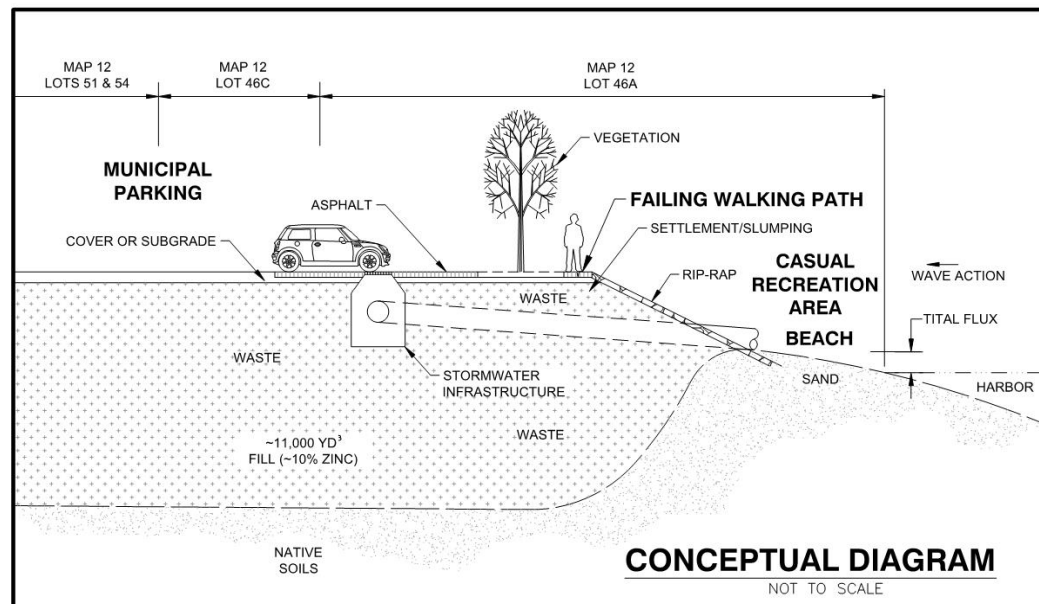
**Analysis of Brownfields Cleanup Alternatives – Preliminary Evaluation  
Former Revere Copper Property  
Assessors Map 12, Lots 46A, 46C, 51 and 54, Plymouth, MA  
MADEP Release Tracking Number (RTN): 4-770**

**Prepared by the Town of Plymouth**

**I. Introduction & Background**

**a. Site Location**

The site is located at 197 Water Street in Plymouth, Massachusetts, USA (herein referred to as “the Site”). The Site is a portion of the Former Revere Copper and Brass Disposal site. The entire Disposal Site encompasses a number of parcels owned by various property owners. The former manufacturing facility was located on the west side of Water Street. Two separately owned properties were located across the street to the east on land filled with waste from the manufacturing facility. One property was owned by Harborview II Nominee Trust, the other was owned by the Town of Plymouth. This ABCA refers only to the property owned by the Town of Plymouth, which is comprised of four assessors parcels Map 12, Lots 46A, 46C, 51 and 54.



**b. Previous Site Use(s) and any previous cleanup/remediation**

The Site was a former tidal wetland which was filled with industrial waste from the former Revere Copper and Brass manufacturing facility. The usage of the Revere Manufacturing facility prior to 1850 is unknown. From the mid-1800s until the late-1800s, Edes Manufacturing Co. produced battery zincs, lamps and metals goods at the manufacturing facility. From the late 1800s through 1993, Edes Manufacturing Division of Revere Copper and Brass produced zinc, copper, and magnesium products at the manufacturing facility. During the early 1900s the land

east of Water Street (the Site, which is owned by the Town, and the adjacent property, owned by Harborview II Nominee Trust) was filled with material likely from the manufacturing facility. Remediation efforts reportedly costing over \$2 million dollars were undertaken at the manufacturing facility by the Plymouth Redevelopment Authority and a partial permanent solution was achieved in 2006 for that portion of the Disposal Site with application of a deed restriction. At the Harborview II Nominee Trust property, a partial permanent solution was achieved in 2005 with remediation by utilization site specific risk assessment and an activity and use limitation. For the 197 Water Street property (the Site, and the subject of this ABCA), a partial permanent solution was not feasible because concentrations of zinc in soil are an order of magnitude higher than Upper Concentration Limits (UCLs). UCLs are concentrations which have been defined by Massachusetts regulation to represent a risk to public welfare and the environment under future conditions regardless of the outcome of site specific risk assessments. As such, a partial temporary solution was achieved for the 197 Water Street property (the Site) in 2008. No remediation was performed at the Site and the partial temporary solution was based on a site specific risk assessment and a deed restriction. All subsequent discussion in this document will be limited to the Site (197 Water Street).

**c. Site Assessment Findings**

According to the Class C-1 Partial RAO Statement and Report dated February 7, 2008, 18 soil borings were advanced at the Site in June 2003 and January 2004. Concentrations of total zinc exceeded the UCL (10,000 mg/kg) in samples from 10 of the 18 borings, with concentrations ranging up to 180,000 mg/kg. Extractable petroleum hydrocarbon (EPH) fractions were also detected in soil, in some cases at concentrations greater than UCLs (10,000 to 20,000 mg/kg depending upon the hydrocarbon range). Groundwater samples did not exceed zinc UCLs (20,000 ug/L), but did exceed the GW-3 standard (a groundwater standard based on ecological risk potential) of 900 ug/L. Surface water from the abutting harbor was also sampled and analyzed for zinc; concentrations did not exceed USEPA chronic ambient water quality criteria or EPA-derived final chronic values (AWQC/FCV). Sediment was sampled and analyzed for zinc; concentrations did not exceed NOAA effects range low (ER-L) values. Storm water and pore water were also collected and analyzed for zinc; concentrations exceeded the AWQC/FCV (0.081 mg/L).

In September 2004 an additional 15 soil borings were performed to confirm that other areas of the parking lot were not impacted. No concentrations of zinc or EPH were detected at concentrations greater than applicable risk based standards.

During the conduct of a five year periodic review of the temporary solution in 2013, samples of the sand along the beach were collected in April and June of 2014. Analysis of the samples revealed that zinc is present on the beach and in some cases at concentrations higher than the most stringent soil standards (1,000 mg/kg). However, exposure point concentrations based upon the average of the results were less than applicable risk based standards.

## **II. Applicable Regulations and Cleanup Standards**

### **a. Cleanup Oversight Responsibility**

In Massachusetts the cleanup of hazardous waste sites is privatized, cleanups are overseen by Licensed Site Professionals (LSPs) who are licensed by the state to make decisions and render opinions regarding hazardous waste sites. The work of LSPs is ultimately subject to audit by the Massachusetts Department of Environmental Protection (DEP). In the case of this Site, the Town has been in close communication with the DEP for many years and has actively sought and received compliance assistance. It is expected that the cleanup would be conducted under a Release Abatement Measure (RAM) Plan. Regulatory documents related to this cleanup will be submitted to the DEP and tracked under RTN 4-770.

### **b. Cleanup Standards for major contaminants**

The Massachusetts DEP Method 1 Risk Characterization standards (310 CMR 40.0970) will be used for this project. The goal of the project is to protect public health and the environment and to achieve a permanent solution through installation of enhanced engineering controls (e.g. an Engineered Barrier which incorporates features to prevent washout by storm surge and loss of coastline).

### **c. Laws & Regulations Applicable to the Cleanup**

The Massachusetts Contingency Plan (MCP) governs cleanups in the state of Massachusetts and will be applicable to this project. City by-laws, the Federal Small Business Liability Relief and Brownfields Revitalization Act, the Federal Davis-Bacon Act, OSHA regulations, and federal, state, and local procurement laws will also be applicable. Various permits may be required for construction or excavation.

## **III. Evaluation of Cleanup Alternatives**

### **a. Cleanup Alternatives Considered**

Three alternatives have been evaluated, including; Alternative #1: No Action, Alternative #2: Soil Excavation and Off-Site Disposal/Treatment/Reuse, Alternative #3: Improved Engineering and Administrative Controls to allow greater certainty for protection of human health and the environment and greater potential for redevelopment. This alternative would involve installing an engineered barrier specifically designed to separate the waste from the beach and harbor. It would also involve relocation of the storm water infrastructure, which is currently of unknown construction and condition and travels through the waste deposit and discharges into the harbor next to the beach. Lastly, the alternative would involve providing a more appropriate horizontal barrier to limit direct exposure, as the current barrier was preexisting at the time of the partial temporary solution was achieved and was not designed as a remedial cap. Note that under the MCP, permanent solutions that involve capping of soils that exceed UCL concentrations must incorporate the use of an engineered barrier that meets the

## Attachment F

requirements of RCRA Subpart N, 40 CFR 264.300, 310 CMR 30.600: Technical Requirements for All Hazardous Waste Facilities, or equivalent standards.

### **b. Cost Estimate of Cleanup Alternatives**

The effectiveness, implementability, and preliminary cost estimate for each alternative is presented below.

#### Effectiveness

Alternative #1: The no action alternative leaves the temporary solution in place which has thus far been effective in minimizing potential human exposures to contamination. Exposure to environmental receptors appears minimal, but on-going and subject to change. There is uncertainty as to how long the temporary solution will continue to be protective of human health and the environment. A deteriorating revetment that is in need of regular repair and was not designed as a remedial solution separates the waste from a beach used by locals and tourists and Plymouth Harbor which is an Estimated Rare Wetland Wildlife Habitat and aesthetic, historic, recreational, economic, and ecological resource. According to available information, on average, approximately 1.5 feet of coast is lost each year near the Site. As such, this alternative is not an effective long term solution for the Site.

Alternative #2: The Soil Excavation and Off-Site Disposal/Treatment/Reuse alternative would be highly effective because the contamination would be removed from the Site.

Alternative #3: Improved Engineering and Administrative Controls would be effective in achieving a solution that is sustainable for a longer period of time and provides better resilience against natural disasters.

#### Implementability

Alternative #1: No action is very implementable. On-going responsibilities under the temporary solution are relatively easy to implement. Albeit, regular maintenance (and potential replacement) of the current revetment and paved surface is likely to be required.

Alternative #2: Soil Excavation and Off-Site Disposal/Treatment/Reuse is difficult to implement. The material would need to be characterized for disposal and a suitable facility would need to be identified. The material would need to be excavated and trucked off-site, resulting in a short term disruption to the community. Given the nature of the contamination dust suppression and monitoring would be required. Its location near the Plymouth Harbor would also necessitate robust and potentially expensive groundwater control systems/bulkheads.



## Attachment F

Alternative #3: Improved Engineering and Administrative Controls would also be less difficult than Alternative #2 to implement. An alternative vertical containment system to keep the material from entering the beach or harbor would be designed. The storm water system may be relocated and the surface regraded and a new horizontal cap installed. As indicated above, the current infrastructure systems which are serving as a makeshift containment system will eventually need to be replaced under the “No Action” alternative in order to achieve a permanent solution or even maintain the temporary solutions, so this alternative should be seriously considered.

### Cost

Alternative #1: The estimated cost for Alternative #1 is \$2,000/year in perpetuity, plus the substantial cost to address any outbreak of waste onto the beach or harbor in the future. This substantial cost is subject to repeat itself if re-constructed in a similar manner.

Alternative #2: The estimated cost for Alternative #2 may range from \$2MM to \$8MM depending on the results of waste characterization and disposal costs.

Alternative #3: The estimated cost for Alternative #3 is \$720,000 plus approximately \$1,000/year.

### **c. Recommended Cleanup Alternative**

Alternative #1 is not a sustainable long term alternative. The loss of coastline in this area will ultimately require another alternative action.

Alternative #2 is not a cost effective alternative. The Town does not have the resources to implement Alternative #2.

Therefore, Alternative #3 is the selected alternative. Alternative #3 better encapsulates the material in-place; thereby, reducing the risk to sensitive human and ecological receptors and achieving a permanent solution under the MCP. Alternative #3 accomplishes this goal with minimal impact to the surrounding community.

## Application for Federal Assistance SF-424

\* 1. Type of Submission:

- ☐ Preapplication  
☒ Application  
☐ Changed/Corrected Application

\* 2. Type of Application:

- ☒ New  
☐ Continuation  
☐ Revision

\* If Revision, select appropriate letter(s):

\* Other (Specify):

\* 3. Date Received:

12/18/2015

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

### 8. APPLICANT INFORMATION:

\* a. Legal Name:

Town of Plymouth

\* b. Employer/Taxpayer Identification Number (EIN/TIN):

04-6001271

\* c. Organizational DUNS:

0833865080000

### d. Address:

\* Street1:

11 Lincoln Street

Street2:

\* City:

Plymouth

County/Parish:

Plymouth

\* State:

MA: Massachusetts

Province:

\* Country:

USA: UNITED STATES

\* Zip / Postal Code:

Zip/02360

### e. Organizational Unit:

Department Name:

Marine & Environmental Affairs

Division Name:

### f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

Mr.

\* First Name:

David

Middle Name:

\* Last Name:

Gould

Suffix:

Title:

Director

Organizational Affiliation:

Town of Plymouth

\* Telephone Number:

508-747-1620 x134

Fax Number:

508-830-4081

\* Email:

dgould@townhall.plymouth.ma.us

## Application for Federal Assistance SF-424

### \* 9. Type of Applicant 1: Select Applicant Type:

C: City or Township Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

\* Other (specify):

### \* 10. Name of Federal Agency:

Environmental Protection Agency

### 11. Catalog of Federal Domestic Assistance Number:

66.818

CFDA Title:

Brownfields Assessment and Cleanup Cooperative Agreements

### \* 12. Funding Opportunity Number:

EPA-OSWER-OBLR-15-06

\* Title:

FY16 Guidelines for Brownfields Cleanup Grants

### 13. Competition Identification Number:

Title:

### 14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

### \* 15. Descriptive Title of Applicant's Project:

Town of Plymouth Water Street Parking Lot Permanent Solution - Lot 46C, Former Revere Copper Property

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

**Application for Federal Assistance SF-424****16. Congressional Districts Of:**\* a. Applicant \* b. Program/Project 

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

**17. Proposed Project:**\* a. Start Date: \* b. End Date: **18. Estimated Funding (\$):**

* a. Federal	<input type="text" value="200,000.00"/>
* b. Applicant	<input type="text" value="40,000.00"/>
* c. State	<input type="text" value="0.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="0.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="240,000.00"/>

**\* 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

- ☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .
- ☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- ☒ c. Program is not covered by E.O. 12372.

**\* 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

**21. \*By signing this application, I certify (1) to the statements contained in the list of certifications\*\* and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances\*\* and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ \*\* I AGREE

\*\* The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

**Authorized Representative:**

Prefix:  \* First Name:

Middle Name:

\* Last Name:

Suffix:

\* Title: \* Telephone Number:  Fax Number: \* Email: \* Signature of Authorized Representative:  \* Date Signed: